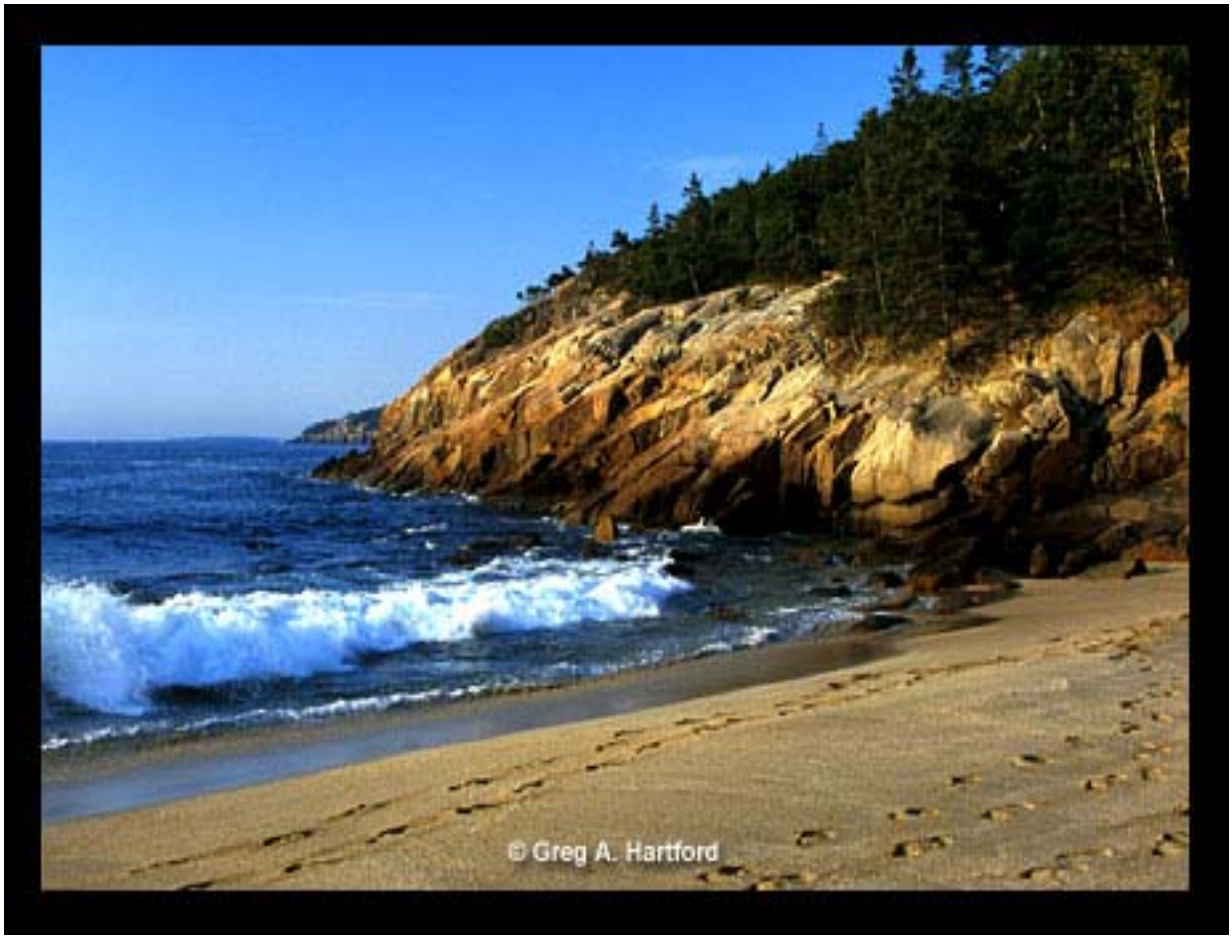
National Park Service
U.S. Department of the Interior

Acadia National Park
Maine

Sand Beach Visitor Facilities Rehabilitation

Environmental Assessment



U.S. Department of the Interior
National Park Service

Environmental Assessment
Sand Beach Visitor Facilities Rehabilitation

Acadia National Park
Hancock County, Maine
December 18, 2002

Proposed Action:
The National Park Service proposes to rehabilitate and upgrade visitor facilities at Sand Beach in Acadia National Park, Maine, to improve visitor experiences, park operations, and to assure that these facilities are universally accessible. Improvements would include rehabilitating the restroom and replacing the changing rooms, adding storage facilities for lifeguard equipment, upgrading utilities, and making the facilities accessible to persons with disabilities. This document presents three alternative proposals, and analyzes their potential effects on the human environment in accordance with the National Environmental Policy Act. The National Park Service invites written public comments on the project.

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Note to Reviewers and Respondents:
If you wish to comment on the Environmental Assessment, you may mail comments by January 17, 2003 to the name and address below. Please note that names and addresses of people who comment become part of the public record. If you wish for us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will make all submissions from organizations, businesses, and individuals identifying themselves as representatives or officials of organizations or businesses available for public inspection in their entirety.

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Comments submitted via electronic mail may be addressed to judy_hazen_connery@nps.gov and must be received by January 17, 2003.

Contents

1 Introduction: Purpose & Need 1

1.1 Introduction 1
1.2 Project Background 1
1.2.1 History and Significance of the Park 1
1.2.2 Sand Beach 5
1.2.3 Plans Outlining Management Goals 5
1.3 Purpose and Need for Action 10
1.4 Impact Topics 11
1.5 Impact Topics Considered but Dismissed from Further Analysis 11

2 Alternatives 21

2.1 Introduction 21
2.2 Alternative A -- No Action Alternative 21
2.3 Alternative B -- Preferred Alternative 21
2.4 Alternative C 26
2.5 Environmentally Preferred Alternative 29

3 Affected Environment & Environmental Consequences 31

3.1 Introduction 31
3.2 Methodology for Assessing Impacts 31
3.3 Natural Resources 34
3.3.1 Vegetation 34
3.3.2 Wildlife and Wildlife Habitat 39
3.4 Visitor Use and Experience 41
3.4.1 Affected Environment 41
3.4.2 Environmental Consequences 41
3.5 Park Infrastructure and Operations 44
3.5.1 Affected Environment 44
3.5.2 Environmental Consequences 44

4 Consultation & Coordination 47

4.1 Introduction 47
4.2 Brief History of Planning and Public Involvement 47
4.3 Interagency Coordination 47
4.4 Compliance 48
4.5 List of Recipients 50

References

Acronyms 53
Bibliography 54
List of Preparers 55

Appendices

Appendix A: Correspondence

Figures

Figure Number	Description	Page Number
1	Location of Acadia National Park	3
2	Project Location	7
3	Existing Conditions	8
4	Soils Mapping	15
5	Alternative B (Preferred Alternative)	23
6	Alternative C	27
7	Utilities	28
8	Vegetation Mapping	35

Tables

Table	Description	Page Number
1	Summary of Environmental Consequences	30

1 Introduction: Purpose & Need

1.1 Introduction

The National Park Service (NPS) proposes to rehabilitate and upgrade visitor facilities at Sand Beach in Acadia National Park, Maine, to improve visitor experiences, park operations, and to assure that these facilities are universally accessible. Improvements would include rehabilitating the restroom and replacing the changing rooms, adding storage facilities for lifeguard equipment, upgrading utilities, and making the facilities accessible to persons with disabilities. Other minor changes are also proposed to provide year-round restroom facilities, administrative space, and telephone service.

This Environmental Assessment (EA) analyzes the proposed action and alternatives and their impacts on the environment. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, regulations of the Council on Environmental Quality (40 CFR 1508.9), and *NPS Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision-making* (NPS 2001). A list of acronyms used in this document can be found on page 53.

1.2 Project Background

1.2.1 History and Significance of the Park

Acadia National Park is located in the mid-coast region of Maine, approximately 45 miles southeast of Bangor (Figure 1). The park, established in 1916 when President Woodrow Wilson set aside 6,000 acres as Sieur de Monts National Monument, became the first national park east of the Rocky Mountains. Today, the park encompasses 35,000 acres on Mount Desert Island, the Schoodic Peninsula, and various other islands including Isle au Haut, and is among the top 20 most visited national parks in the U.S., having 2 to 3 million visits in 2001. With only 6 percent of the Maine coast accessible to the public, and one-quarter of that acreage in Acadia National Park, the park is one of the most intensively used leisure destinations in the northeastern United States (NPS 1992).

Figure 1

1.2.2 Sand Beach

Sand Beach is located in Newport Cove, on the southeastern section of Mount Desert Island, one half mile south of the entrance station on the Park Loop Road (Figure 2). Sand Beach itself is the only sandy Atlantic beach within the park, and is one of the few sand beaches on Mount Desert Island that is accessible to the public. Much of the sand surface is actually composed of pulverized seashells. Swimming is allowed at the site all year, though only monitored by park lifeguards between Memorial Day and Labor Day.

The visitor facilities at Sand Beach consist of two changing room structures, a comfort station, and a temporary portable toilet (Figure 3). Set back from the parking lot approximately 30 feet, the changing stations were constructed in 1955 and each consist of twelve wooden stalls on a raised concrete slab foundation. At the end of each building is a foot washing spigot and grated catchment. A paved walkway separates the changing stations and leads to the comfort station, which is at a higher elevation and accessed by climbing six granite stairs.

The comfort station, constructed in 1952 and improved in the mid-1980s, is a single story building with a wood exterior, a hipped roof, and entrances on either side for visitors. This station has served as a model for newer restrooms throughout the park, as it mimics many of the same rustic design qualities of the historic structures while incorporating modern technologies such as a passive ventilation system. The comfort station is open from Memorial Day weekend through Columbus Day.

Sand Beach is a popular stopping point for visitors, including those using the Island Explorer and commercial bus tours. They use the facilities not only for access to the beach and nearby hiking trails but also to see the surrounding rocky coast and to use restroom facilities.

1.2.3 Plans Outlining Management Goals

Acadia National Park General Management Plan

The park's mission is based on park legislation and the *Acadia National Park General Management Plan* (NPS 1992):

"The National Park Service at Acadia National Park protects and preserves outstanding scenic, natural, scientific, and cultural values for present and future generations. These resources include a glaciated coastal and island landscape, biological diversity, clean air and water, and a rich cultural heritage. Acadia National Park also offers opportunities for high-quality non-consumptive recreation education, and scientific research."

The *General Management Plan* (GMP) articulates a series of specific management goals for the park. Of particular relevance to this project, these include:

Figure 2

Figure 3

- Protect and manage the park's natural resources, giving priority to those that are exceptionally fragile or significant;
- Provide for a variety of high-quality, resource-related visitor experiences while ensuring a safe and positive social environment;
- Manage, maintain, and develop services and facilities to adapt to changing visitor patterns and needs, to serve special populations, and to minimize resource impacts;
- Improve accessibility for persons with disabilities.

Acadia National Park Strategic Management Plan

The park's mission statement was formally adopted in the *Acadia National Park Strategic Management Plan* (NPS 1997), which identified three primary purposes for the park:

- To protect and conserve the land and water resources, the scenery, the natural and historic objects, the wildlife, and the wild character of the park.
- To promote and regulate the use of the park for the benefit and enjoyment of the public in such a manner and by such means as would leave park resources unimpaired for the enjoyment of future generations.
- To protect and preserve the scenic, ecological, historical, archeological, and cultural resources of the Acadian archipelago and to limit development of the islands and conserve their natural qualities and traditional resource-based land uses.

Other Management Policies and Documents

The *2001 NPS Management Policies* (NPS 2001) provides policies applicable to the management of the national park system, including policies pertaining to accessibility for persons with disabilities, construction sites, and revegetation. Specific elements of these policies considered in this project include:

- The NPS will provide accessibility consistent with preserving park resources, visitor safety, and providing a high-quality visitor experience. The NPS will design, construct, and operate all buildings and facilities so they are accessible to, and usable by, persons with disabilities to the greatest extent reasonable. All new and altered buildings will be in conformance with the appropriate design standards.
- Construction sites will be limited to the smallest feasible area. Ground disturbance will be controlled to prevent undue damage to vegetation, soils, and archeological resources, and to minimize air, water, soil, and noise pollution.
- To the maximum extent possible, plantings will consist of species that are native to the park or historically appropriate for the period or event. Imported soils must be compatible with existing soils and free of undesired seeds and organisms.

In addition, *Director's Order 42: Accessibility for Visitors with Disabilities*, provides guidance and implementation strategies for achieving the goals of the management policies.

1.3 Purpose and Need for Action

The purpose of the Sand Beach Visitor Facilities Rehabilitation project is to make facilities universally accessible; to improve year-round restroom facilities; to rehabilitate facilities to meet user needs and to make them structurally stable; to improve park operations by providing a designated, secure space for lifeguard equipment storage and administrative duties; and to provide adequate services throughout the year by upgrading utilities.

The visitor facilities at Sand Beach are not universally accessible. The comfort station is reached via a set of six granite steps (Photo 1), and the changing rooms are raised above grade on concrete slabs (Photo 2). Year-round visitor access requires toilet facilities, but a temporary vault toilet that is not accessible to visitors with disabilities provides the only restroom facilities in the off-season.

The changing room structures, constructed in 1955, are deteriorating. The wood at the bottom of the walls has experienced extensive weathering, and many boards are rotted. There are 24 changing rooms, 12 in each building. However, they are rarely, if ever, all needed at one time.

There is no secure space for storing lifeguard equipment and no space for lifeguard administrative functions such as preparing reports. Emergency rescue equipment (including a kayak and surfboard) is stored in a small maintenance storage room in the comfort station building. Due to limited storage space, the remaining equipment is stored in two of the changing rooms and is secured only with padlocks. The padlocked rooms have been broken into and vandalized several times. The changing rooms also do not offer space for administrative duties or locker facilities for the lifeguards' personal items or for securing valuable items lost by visitors. There is no electric or phone service to the facility for use in emergency situations.

Utility services to the site, including water, sewer, electric, and telephone, are inadequate for peak season demand. The water supply for the Sand Beach facilities comes overland from an aboveground water storage tank at Blackwoods Campground. A combination high-density polyethylene (HDPE) and galvanized steel line feeds to the Sand Beach comfort station. The water system requires frequent repair due to the age and deteriorated condition of some of the pipes and joints.

The sewer system is comprised of a buried holding tank, a duplex submersible pump station, and a buried motor-actuated valve box. The existing, belowground sewer pumps are corroded and prone to failure. The underground chambers are confined spaces and are difficult to work in when maintenance or repairs are required.

There is no electric service to the comfort station, changing rooms, or bus shelter. The area is therefore not easily accessible after dark.

1.4 Impact Topics

The following impact topics were chosen based on the Council on Environmental Quality's NEPA regulations and NPS Director's Order 12, by assessing the issues raised during regulatory and scoping meetings, staff discussions, and by observing the potentially affected resources at the project site. These include: vegetation, wildlife and wildlife habitat, visitor use and experience, and park infrastructure and operations.

1.5 Impact Topics Considered but Dismissed from Further Analysis

The following topics would not be affected by the proposed action and were eliminated from further evaluation. They are briefly discussed below but will not be analyzed in detail in this document.

1.5.1 Cultural Resources

Historic Buildings and Structures

Cultural resources potentially impacted by this project include a comfort station constructed in 1952 and two changing rooms, both constructed in 1955. These three buildings are currently being evaluated by the NPS for eligibility to the National Register of Historic Places, as required by the National Historic Preservation Act of 1966, as amended (NHPA). The comfort station is considered potentially eligible because its architectural style reflects the rustic design standards associated with early park development from 1933 to 1942. It is unlikely that the changing rooms will be deemed eligible as they probably do not meet the criterion of exceptional importance, a requirement for buildings and structures less than fifty years old. However, the final determinations of eligibility for these structures will be made in consultation with the State Historic Preservation Officer (SHPO) before the start of the proposed project.

Archeological Resources

All ground-disturbing activities would take place in previously disturbed areas. State-certified archeologists have conducted a reconnaissance level survey to assess the archeological potential of the impact areas. No archeological resources were identified. If during construction previously undiscovered archeological resources are discovered, all work in the immediate vicinity of the discovery would be halted until the resources could be identified and documented and an appropriate mitigation strategy developed, if necessary, in consultation with the SHPO.

Cultural Landscapes

The landscape is currently being evaluated by the NPS for eligibility to the National Register of Historic Places, as required by the NHPA. It is unlikely that the landscape will be deemed eligible; however, the final determination will be made in consultation with the SHPO before the start of the proposed project.

Ethnographic Resources

Ethnographic resources are defined by NPS as any "site, structure, object, landscape, or natural resource feature assigned traditional legendary, religious, subsistence, or other significance in the cultural system of a group traditionally associated with it" (*Director's Order 28: Cultural Resource Management Guideline*). Presently, there are no known ethnographic sites in the project area. Copies of the environmental assessment will be forwarded to each of the park's affiliated tribes for review and comment. These groups include the Passamaquoddy Tribe - Indian Township; Passamaquoddy Tribe – Pleasant Point; Penobscot Nation; Houlton Band of Maliseet Indians; and Aroostook Band of Micmacs. If the tribes subsequently identify the presence of ethnographic resources, appropriate mitigation measures would be undertaken in consultation with the tribes. The location of ethnographic sites would not be made public. In the unlikely event that human remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered during construction, provisions outlined in the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001) would be followed.

1.5.2 Indian Trust Resources

Secretarial Order 3175 requires that any anticipated impacts to Indian trust resources from a proposed project or action by Department of Interior agencies be explicitly addressed in environmental documents. The federal Indian trust responsibility is a legally enforceable fiduciary obligation on the part of the United States to protect tribal lands, assets, resources, and treaty rights, and it represents a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native tribes.

There are no Indian trust resources in Acadia National Park. The lands comprising the park are not held in trust by the Secretary of the Interior for the benefit of Indians due to their status as Indians. Therefore, Indian trust resources was dismissed as an impact topic.

1.5.3 Special Status Species

According to the U.S. Fish and Wildlife Service (FWS), the Maine Department of Inland Fisheries and Wildlife (MDIFW), and information in NPS documents and files, at least 47 species of wildlife are listed as threatened or endangered in Maine and its adjacent waters. An additional two species are proposed for federal listing. Nine of these species have been documented within or adjacent to the park. The Sand Beach area has been highly disturbed and is subject to continuous human activity throughout much of the year. Based on the absence of suitable habitat and the lack of documented sightings despite frequent surveys by park biologists, no special status species would be affected by the actions proposed in this EA. The FWS has confirmed that there is no known listed species that would be affected by the proposed action and no further action is required under Section 7 of the Endangered Species Act (see correspondence in Appendix A).

1.5.4 Soils

The Sand Beach project site is comprised of soils from the Schoodic-rock outcrop (Figure 4). These soils originated from glacial till. Schoodic soils are very shallow, nearly level to very steep, excessively well drained, and can be found on ridges and summits. The surface is very gravelly, fine sandy loam that is easily blown away once exposed. Rock outcrops consist of exposed bedrock on the crests of ridges and mountains and on steep side slopes of moderately deep to bedrock, and on steep side slopes of mountains. These soils are found in depressions between shallow till ridges (Gilman et al. 1988). The actions proposed at Sand Beach would not permanently disturb large areas of soil. There would be no disturbance of sand or soil on Sand Beach itself.

1.5.5 Wetlands and Water Quality

The project site is near coastal wetlands, including intertidal beach and salt marsh, and the Atlantic Ocean but is more than 100 feet from these resources and would not result in any wetland alterations or impacts to water quality.

Figure 4

1.5.6 Floodplains

The Federal Emergency Management Agency (FEMA) has determined the 100-year flood zone elevation for the Sand Beach area to be 12 feet (FEMA 1988). There would be no work in the 100-year floodplain or areas subject to inundation by floodwaters; therefore, the proposed action would not affect floodplain values.

1.5.7 Geology

Sand Beach itself is a high-latitude, calcareous beach and is near the project; however, the project would not affect the beach, any bedrock outcrops or other geological features.

1.5.8 Wild and Scenic Rivers

No federal wild and/or scenic rivers are located within the project area.

1.5.9 Scenic Roads and Viewsheds

The Sand Beach area is accessed from the scenic Park Loop Road approximately one-half mile south of the entrance station. The Park Loop Road, along with Paradise Hill Road, make up the Acadia Byway, designated an All-American Road by the Federal Highway Administration's National Scenic Byways Program in 2000 (National Scenic Byways Program 2002a). The roads are also listed as Maine State Scenic Byways by the Maine Department of Transportation (National Scenic Byways Program 2002b). The parking lot and buildings at Sand Beach are screened from the Park Loop Road by trees and shrubs, and would not be visible from the road in any of the alternatives.

1.5.10 Air Quality

The Clean Air Act of 1963, as amended, and associated NPS policies require the NPS to protect air quality in parks. Acadia is considered a Class I area under the Clean Air Act, which means that the park should receive the highest level of air-quality protection. Acadia National Park is downwind from large urban and industrial areas in states to the south and west. Periodically, high concentrations of air pollutants move over the park from these areas. Summer ozone levels occasionally exceed federal health standards, and the effects of atmospheric deposition are a major concern at the park. Acid precipitation (rain, snow, and fog) can also be a major influence on lake and stream chemistry, cause nutrient enrichment in estuaries, and affect sensitive vegetation.

Hauling material, operating equipment, and other construction activities could result in temporarily increased vehicle exhaust and emissions. However, hydrocarbons, NO_x, and SO_2 emissions, as well as any airborne particulates created by fugitive dust plumes, would be rapidly dissipated by air drainage because air stagnation is rare at the project site. Overall, there could be a negligible degradation of local air quality; however, such effects would be temporary, lasting only as long as construction. Acadia National Park's Class I air quality would be unaffected by the proposal. Therefore, air quality was dismissed as an impact topic.

1.5.11 Soundscape

In accordance with *NPS Management Policies 2001* and *Director's Order 47: Sound Preservation and Noise Management*, an important part of the NPS mission is preservation of natural soundscapes associated with national park units. Natural soundscapes exist in the absence of human-caused sound. The natural ambient soundscape is the aggregate of all the natural sounds that occur in park units, together with the physical capacity for transmitting natural sounds. Natural sounds occur within and beyond the range of sounds that humans can perceive and can be transmitted through air, water, or solid materials. The frequencies, magnitudes, and durations of human-caused sound considered acceptable varies among NPS units, as well as potentially throughout each park unit, being generally greater in developed areas and less in undeveloped areas.

Noise levels at Sand Beach are generally consistent with a quiet, rural environment, where appreciation of the natural soundscape is important. Excavating and using equipment during construction would occur during the construction period and would result in a temporary increase in noise levels in the area. These levels, however, would return to normal once the project was completed. The impact would be negligible, therefore soundscapes was dismissed as an impact topic.

1.5.12 Lightscape

In accordance with *NPS Management Policies 2001*, the National Park Service strives to preserve natural ambient landscapes, which are natural resources and values that exist in the absence of human caused light. Lighting fixtures proposed at the visitor facilities would focus light towards the ground, resulting in short- and long-term negligible impacts to the night sky. Therefore, lightscape was dismissed as an impact topic.

1.5.13 Environmental Justice

According to the Environmental Protection Agency (EPA), environmental justice is the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Presidential Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. The proposed action would not have health or environmental effects on minorities or low-income populations or communities as defined in the EPA's *Draft Environmental Justice Guidance* (July 1996). Therefore, environmental justice was dismissed as an impact topic.

1.5.14 Socioeconomic Environment

The economies of the communities surrounding the park are based on professional services, fishing, boat building, construction, educational research, and tourist services and sales. Visitors to the park have a considerable fiscal impact on the surrounding communities, and during the summer, there is a noticeable shift in emphasis to visitor-service industries. Also, the influx of seasonal residents increases the population substantially, changing the social environment of Mount Desert Island and Bar Harbor. Work proposed to rehabilitate the Sand Beach visitor facilities would provide construction jobs on a short-term basis, but would not affect the overall socioeconomic impact of the park on surrounding areas.

The proposed action would neither change local and regional land use nor appreciably impact local businesses or other agencies. Implementing the proposed action could provide a negligible beneficial effect to the economies of nearby Bar Harbor as well as Hancock County (e.g. minimal increases in employment opportunities for the construction workforce and revenues for local businesses and government generated from construction activities and workers). Any increase, however, would be temporary and negligible, lasting only as long as construction. Therefore, socioeconomic environment was dismissed as an impact topic.

2 Alternatives

2.1 Introduction

This chapter presents a description of the alternatives considered for the proposed Sand Beach Visitor Facilities Rehabilitation. It also identifies an environmentally preferred alternative. The NPS has developed three alternatives for the Sand Beach Visitor Facilities Rehabilitation project:

- Alternative A – No Action
- Alternative B – Preferred Alternative
- Alternative C

2.2 Alternative A – No Action Alternative

The No Action Alternative describes the action of continuing the present management operation and condition. It does not imply or direct discontinuing the present action or removing existing uses, developments, or facilities. The No Action Alternative provides a basis for comparing the management direction and environmental consequences of the preferred alternative. Should the No Action Alternative be selected, the NPS would respond to future needs and conditions associated with the Sand Beach visitor facilities without major actions or changes in the present course.

This alternative would maintain the structures, facilities, policies, and landscape features at Sand Beach in their existing condition (Figure 3). Emergency repairs to buildings and utilities would be made, and improvements to the changing stations and comfort station to make them universally accessible would be made incrementally if and when funds became available.

2.3 Alternative B – NPS Preferred Alternative

Alternative B would rehabilitate the existing comfort station at Sand Beach; demolish and replace the southern changing facilities; improve site drainage to correct existing drainage problems; and upgrade the existing utility service, including electric, wastewater, telephone, and water supply (Figure 5). Specific components include:

Figure 5

- Constructing a universally accessible ramp to the comfort station;
- Rehabilitating the interior and exterior of the existing comfort station;
- Demolishing the north and south changing room structures;
- Rebuilding the south changing room structure;
- Constructing a lifeguard storage building and office on the site of the northern changing room;
- Constructing a year-round, universally accessible vault toilet in the new lifeguard storage building;
- Upgrading utilities serving the facilities.

A universally accessible, paved ramp would be constructed to the comfort station. The ramp would be built in a wooded area south of the comfort station (Photo 3), between the comfort station and the south changing rooms. The interior of the comfort station would be upgraded to meet ADA requirements, and the exterior of the building would be repaired as needed. The exterior of the rehabilitated building would have the same general appearance as the existing building in terms of building materials and overall design. This building would be open seasonally, but closed in the winter.

The south changing room structure would be demolished. A new structure of the same size and appearance as the existing building would be constructed on the original foundation. The north structure would be completely removed and replaced with a new structure approximately half the size (260 square feet). The new smaller north structure would contain lifeguard storage and administrative areas and a year-round, universally accessible vault toilet. This new lifeguard storage building would also be constructed in the rustic design style found throughout the park.

The new lifeguard storage building would be approximately half the size of the existing north changing room. The remaining area (180 square feet) would be revegetated with native vegetation using appropriate native species propagated from local genetic stocks to protect the biological diversity of Acadia National Park. Species that could be used for revegetation include red maple (*Acer rubrum*), balsam fir (*Albies balsamea*), red spruce (*Picea rubens*), white pine (*Pinus strobus*), shadbush (*Amelanchier canadensis*), winterberry (*Ilex verticillata*), wild rose (*Rosa virginiana*), and wild raisin (*Viburnum cassinoides*).

Minor grading modifications would be made and corrugated metal piping with small drop inlets would be installed just behind the comfort station building to correct drainage problems (Figure 6). Sections of concrete sidewalk in front of the south changing room stalls would be replaced with bituminous concrete walks at the same elevation as the floor of the changing stalls to allow for universal accessibility.

The proposed improvements include upgrading existing utilities (Figure 6). Buried wastewater pumps would be replaced with aboveground pumps enclosed in a fiberglass shelter, but would remain in roughly the same location. The aboveground pump would be screened with native shrubs. Existing wastewater pipes would be sliplined with 4-inch piping from the new pump station to the comfort station. Galvanized steel sections of the existing water pipes (a combination of 2-inch surface laid HDPE and galvanized steel) from Blackwoods Campground to the comfort station would be replaced with new 2-inch HDPE piping. Fittings would be replaced and repairs would be made where necessary along the remaining length of the line. New 1-inch HDPE water pipes would extend to footwashing stations at both ends of the south changing rooms.

The electrical system would also be upgraded in Alternative B. New underground primary electrical service would be provided to the site from existing power lines along the Park Loop Road, with secondary service to the comfort station, lifeguard station, and lift station. Energy-efficient lighting systems, code-compliant receptacles, and new electric infrastructure would be added to the comfort station. Telephone service would be extended to the lifeguard storage building from existing lines along the Park Loop Road via underground cable. To install underground service lines, a small ditch would be dug, approximately 6 inches wide and 12 inches deep. Material removed from the ditch would be piled alongside the ditch and replaced as soon as the line was laid.

Alternative B would cost approximately $350,000.

Mitigation

Appropriate erosion and sedimentation controls would be used in any area where ground disturbance might have the potential to affect nearby water resources. Disturbing soils and using imported topsoil to stabilize and revegetate disturbed areas could result in introducing invasive non-native species. Mitigation measures incorporated into the project, including park staff inspection and approval of sources of topsoil as being free of invasive species and using park-developed native seed mixtures, would reduce the potential for introducing undesirable non-native species.

In order to minimize the disruption to visitors to Sand Beach, all construction activity would be done in the shoulder months (May-June and September-October) or off-season. Notices would be posted in park visitor centers and on the park's web site in advance of construction to make visitors aware of upcoming construction activities. Tour bus companies that use the facilities would be notified at least six months in advance of construction so that tour schedules could be rearranged as needed.

2.4 Alternative C

Alternative C would rehabilitate the existing comfort station structure at Sand Beach; demolish and replace the existing changing facilities; add a lifeguard storage building; improve site drainage to correct existing drainage problems; and upgrade the existing utility service, including electric, wastewater, telephone, and water supply (Figures 6 and 7).

Figure 6

Figure 7

Improvements would be the same as in Alternative B, with minor exceptions. Both changing room structures would be demolished and then rebuilt. The structures would be rebuilt on the existing foundations and would be the same size and style as the existing structures. A new lifeguard storage building would be constructed in the lawn area east of the northern changing room. The new lifeguard building would contain a storage area, office, and a year-round, universally accessible vault toilet. The building would be constructed in the rustic design style found throughout the park. Pavement around the changing rooms and new lifeguard storage building would be graded and repaved to ensure universal accessibility.

All construction activity would be done in the shoulder months (May-June and September-October) or off-season. Alternative C would cost approximately $412,000.

Mitigation

Mitigation for Alternative C would be the same as for Alternative B.

2.5 Environmentally Preferred Alternative

The Environmentally Preferred Alternative is defined by the Council on Environmental Quality as "the alternative that will promote the national environmental policy as expressed in the National Environmental Policy Act [Section 101 (b)]. Section 101 (b) states that the Environmentally Preferred Alternative should:

1) "Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.
2) Ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings.
3) Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.
4) Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.
5) Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.
6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources."

Of the alternatives considered, Alternative B best satisfies the six NEPA criteria. Alternative B offers numerous benefits to the visitors, including year-round, universally accessible restrooms, private changing rooms, and electric and telephone services (criteria 2 and 5). The impacts to natural and cultural resources from rehabilitating existing structures to provide these benefits are generally negligible (criteria 4 and 6).

Alternative A would not achieve the NEPA goals as completely as the preferred alternative because beneficial impacts to visitor experience and park operations would not be realized and existing adverse effects would not be remedied. Facilities at the site would remain inaccessible to visitors with disabilities, in contrast with criteria 2 and 5.

Alternative C would also address visitor accessibility concerns and would improve the visitor experience and park operations by adding utility services. However, adding a new structure to serve as a lifeguard storage building would increase the negative impacts to natural resources, with only a negligible benefit to visitors and park operations.

Table 1 provides a summary of the environmental consequences related to each alternative.

Table 1: Summary of Environmental Consequences

Resource	Alternative A	Alternative B	Alternative C
Vegetation	No impact.	Negligible loss of wooded vegetation for ramp construction (1,000 square feet). No rare plants would be affected.	Negligible loss of lawn vegetation for lifeguard storage building (260 square feet) and sparsely wooded vegetation for ramp (1,000 square feet). No rare plants would be affected.
Wildlife and Wildlife Habitat	No impact.	Negligible loss of wooded and lawn habitat. No rare animals would be affected.	Negligible loss of wooded and lawn habitat. No rare animals would be affected.
Visitor Use and Experience	Long-term moderate adverse impact from deteriorating facilities and lack of accessibility for disabled visitors.	Long-term moderate beneficial impact from improved facilities, utilities, and access. Short-term minor adverse impacts during construction.	Same as Alternative B.
Park Operations and Infrastructure	No changes. Wastewater pumps would continue to fail, especially during peak season.	Moderate long-term beneficial effect from improved drainage around comfort station, new pump station, and new electric and telephone service.	Same as Alternative B.

3 Affected Environment & Environmental Consequences

3.1 Introduction

This chapter describes the existing environmental conditions in and around the project site. Because there are few resources affected by the proposed action, the environmental consequences of the alternatives are also analyzed in this chapter. The chapter is organized by resource topic: the existing conditions are described followed by a discussion of probable impacts of each of the three alternatives. Detailed information on resources in Acadia National Park may be found in the GMP and other park documents. A summary of the resources associated with this project follows.

3.2 Methodology for Assessing Impacts

As required by NEPA, potential impacts are described in terms of type (beneficial or adverse), context (site-specific, local, or regional), duration (short-term or long-term), and levels of intensity (negligible, minor, moderate, or major). Overall, the NPS based these impact analyses and conclusions on the review of existing literature and Acadia National Park studies, information provided by experts within the park and other agencies, and professional judgments.

Type

Beneficial: A positive change in the condition or appearance of the resource or a change that moves the resource toward a desired condition.

Adverse: A change that moved the resource away from a desired condition or detracts from its appearance or condition.

Context

Context is the setting within which an impact is analyzed.

Site-specific: The impact would affect the project site.
Local: The impact would affect the park.
Regional: The impact would affect localities, cities, or towns surrounding the park.

Duration

For all resources and values, the duration of impacts in this document is defined as follows:

Short-term: Impacts that occur only during construction or last less than one year.
Long-term: Impacts that last longer than one year.

Direct versus Indirect Impacts

The following definitions of direct and indirect impacts are considered:

Direct: an effect that is caused by an action and occurs at the same time and place
Indirect: an effect that is caused by an action but is later in time or farther removed in distance, but still reasonably foreseeable

Levels of Intensity

Because definitions of levels of intensity (negligible, minor, moderate, or major) vary by impact topic, intensity definitions are provided separately for each impact topic.

Impairment

In addition to determining the environmental consequences of the preferred and other alternatives, *NPS Management Policies 2001* and *Directors Order 12: Conservation Planning, Environmental Impact Analysis and Decision-Making* require analysis of potential effects to determine whether or not actions would impair park resources.

A fundamental purpose of the NPS, as provided for in its Organic Act (1916) and reaffirmed by the General Authorities Act (1970), as amended 1978, and recognizing a national park system, begins with a mandate to conserve park resources and values. However, the laws do give the National Park Service the management discretion to allow impacts to park resource and values when necessary and appropriate to fulfill the purposes of the park, as long as the impact does not constitute impairment of the affected resources and values. Although Congress has given the National Park Service the management discretion to allow certain impacts within parks, that discretion is limited by the statutory requirement that the NPS must leave park resources and values unimpaired, unless a particular law directly and specifically provides otherwise. The prohibited impairment is an impact that, in the professional judgment of the

responsible NPS manager, would harm the integrity of park resources or values, including opportunities that otherwise would be present for the enjoyment of those resources and values. An impact would be more likely to constitute an impairment to the extent it affects a resource or value whose conservation is:

- Necessary to fulfill specific purposes identified in the establishing legislation or proclamation of the park;
- Key to the natural or cultural integrity of the park or to opportunities for enjoyment of the park; or
- Identified as a goal in the park's general management plan or other relevant NPS planning documents.

Impairment may result not only from NPS activities in managing the park, but also visitor activities or activities undertaken by concessionaires, contractors, and others operating in the park.

Cumulative Impacts

The Council on Environmental Quality (CEQ) regulations, which implement NEPA, require assessment of cumulative impacts in the decision-making process for federal projects. Cumulative impacts are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7).

Cumulative impacts were determined by combining the impacts of the preferred alternative with other past, present, and reasonably foreseeable future actions. It was necessary to identify other ongoing or reasonably foreseeable future projects at Acadia National Park. These cumulative actions are evaluated in the cumulative impact analysis in conjunction with the impacts of the various impact topics. Because some of these cumulative actions are in the early planning stages, the evaluation of cumulative effects was based on a general description of the project.

The recent construction of a bus stop at Sand Beach (Photo 4) could contribute to cumulative impacts and will be analyzed under each impact topic. Other anticipated rehabilitation projects scheduled in the next few years include rehabilitating Seawall Campground and Picnic Area, rehabilitating utilities and grounds at Sieur de Monts, and rehabilitating Blackwoods Campground and Echo Lake Beach facilities. However, these projects are separated by distance or scheduled to occur after the work proposed at Sand Beach and no cumulative effects are anticipated. No other projects are anticipated in the surrounding region that would have cumulative impacts on this project.

Cumulative impacts are considered for all alternatives and are presented at the end of each impact topic discussion.

3.3 Natural Resources

For natural resources, impacts were assessed for vegetation and wildlife. Natural resources dismissed from further consideration were discussed in Chapter 1 of this document.

3.3.1 Vegetation

Affected Environment

The Sand Beach visitor facilities are located in a wooded area between the Park Loop Road and the beach, at the top of the coastal bluff. The open, dry upland woods are dominated by a deciduous forest community, which consists of paper birch (*Betula papyrifera*), trembling aspen (*Populus tremuloides*), and balsam fir with a well-developed shrub and sapling layer containing witch hazel (*Hamamelis virginiana*), wild raisin, and moosewood maple (*Acer pensylvanicum*). The herbaceous layer is relatively sparse and dominated by large-leaved aster (*Aster macrophyllum*). There are no rare or unique communities of plants located in the vicinity of the visitor facilities. Maps prepared by Acadia National Park (1997) show the Sand Beach visitor facilities area's land use is classified as "transportation, commercial, and utilities." The surrounding areas are mapped as Spruce-Fir-Red Maple/Spruce-Yellow Birch and Aspen-Birch forests based on the *Standardized National Vegetation Classification System* (Nature Conservancy 1994) (Figure 8).

Environmental Consequences

Methodology

All available information on vegetation and vegetative communities potentially impacted in the Sand Beach project area was compiled. Predictions about short- and long-term site impacts were based on previous projects with similar vegetation and recent studies. The thresholds of change for the intensity of an impact are defined as follows:

Negligible: No native vegetation would be affected or some individual native plants could be affected as a result of the alternative, but there would be no effect on native species populations. The effects would be short-term, on a small scale, and no species of special concern would be affected.

Minor: The alternative would affect some individual native plants and would also affect a relatively minor portion of that species' population. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required and would be effective.

Figure 8

Moderate: The alternative would affect some individual native plants and would also affect a sizeable segment of the species' population in the long-term and over a relatively large area. Mitigation to offset adverse effects could be extensive, but would likely be successful. Some species of special concern could also be affected.

Major: The alternative would have a considerable long-term effect on native plant populations, including species of special concern, and affect a relatively large area in and out of the park. Mitigation measures to offset the adverse effects would be required and extensive, and success of the mitigation measures would not be guaranteed.

Effects of Alternative A (No Action Alternative)
Alternative A would result in no changes to vegetation cover. There would be no impairment to vegetation.

Cumulative Impacts
Projects throughout the park, including proposed rehabilitation projects at campgrounds and other visitor areas, would have negligible or minor impacts to vegetation. This alternative would not contribute to cumulative impacts to vegetation within the park.

Effects of Alternative B (Preferred Alternative)
Alternative B would result in short-term negligible adverse impacts to vegetation as a result of upgrading the existing water supply and electrical distribution infrastructure. Rehabilitating the water utilities and installing new electric and telephone lines would require cutting vegetation along new alignments at Sand Beach. This would include replacing (metal pipe sections and fittings) and repairing sections of approximately 1.8 miles of aboveground 2-inch pipe on a corridor from Blackwoods Campground. This upgrade would not involve using heavy equipment, and accessing the pipes would have a temporary and negligible effect on vegetation. There would be no permanent vegetation loss along the pipe corridor.

Installing underground electric and telephone lines to the lifeguard storage building and comfort station would require a ditch (approximately 6 inches wide by 12 inches deep). Lawn vegetation between the pump station and lifeguard storage building (approximately 185 linear feet) would be temporarily disturbed while the ditch is dug and the lines are laid. Material from the ditch would be replaced, and the lawn would be reseeded. Between the lifeguard building and the comfort station, the utility lines would be installed while the sidewalk is being replaced; no vegetation would be impacted. The impact to vegetation from installing utilities would be negligible.

Alternative B would result in the negligible loss of approximately 1,000 square feet of sparsely wooded vegetation in order to construct the new access ramp to the comfort station. Impacts to wooded vegetation would be restricted by carefully marking the limits of work prior to demolition and construction. Native lawn vegetation would be restored in an area of approximately 500 square feet where existing paths and the north changing room would be removed.

A mix of plant species, including several non-natives, is found in the lawn at the project site. Areas that would be temporarily disturbed during construction would be reseeded and restored as lawn. Reseeding with the park-developed native seed mixture would help to decrease the amount of non-native vegetation at the site. This would be a minor beneficial long-term impact of Alternative B.

Following revegetation, the park botanist would monitor the area and any invasive non-native species would be managed. Alternative B would have a negligible impact on vegetation, and thus there would be no impairment to vegetation.

Cumulative Impacts
The recently constructed bus stop and shelter in front of the southern changing rooms resulted in the loss of lawn (approximately 270 square feet). Together with Alternative B, there would be an overall decrease in lawn vegetation of 770 square feet. Other proposed and ongoing projects within the park would have negligible to minor impacts on vegetation. The cumulative impact would be negligible overall.

Effects of Alternative C
Alternative C would also result in short-term adverse negligible impacts to vegetation as a result of the upgrades to the existing water supply and electrical distribution infrastructure.

Alternative C would result in the loss of approximately 1,000 square feet of sparsely wooded vegetation in order to construct the new access ramp to the comfort station. This alternative would also result in the permanent loss of approximately 260 square feet of lawn for constructing the lifeguard storage building and vault toilet. Impacts to vegetation would be limited and would be restricted by carefully marking the limits of work prior to demolition or construction.

Alternative C would have a negligible impact on vegetation, and thus there would be no impairment to vegetation.

Cumulative Impacts
This alternative, in combination with the recently constructed bus shelter and bus stop in front of the southern changing rooms, would have a larger cumulative effect on vegetation than Alternative B (cumulative loss of 1,010 square feet), although the impact would still be negligible overall. Ongoing and proposed projects throughout the park could have negligible to minor impacts on vegetation from rehabilitative and new construction and utility improvements. This project would contribute negligibly to impacts to vegetation.

3.3.2 Wildlife and Wildlife Habitat

Many resident and migratory species of wildlife inhabit the park, including at least 46 species of mammals, 338 species of birds, 11 species of reptiles, and up to 15 species of amphibians (NPS 2002). Wildlife in the project area is habituated to high levels of disturbance and human activity. Common wildlife in the area of Sand Beach include coyote (*Canis latrans*), white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), snowshoe hare (*Lepus americanus*), and gray squirrel (*Sciurus carolinensis*). Spring peepers (*Pseudacris crucifer*) and spotted salamanders (*Ambystoma maculatum*), as well as numerous species of insects and other invertebrates also inhabit the project area.

The variety of birds observed in the park as a whole is notable, and most of these have been observed in the Sand Bach area as well. Some of the most common include American robin (*Turdus migratorius*), bluejays (*Cyanocitta cristata*), tufted titmouse (*Parus bicolor*), yellow-rumped warbler (*Dendroica coronata*), white-breasted nuthatch (*Sitta carolinensis*), red-breasted nuthatch (*Sitta canadensis*), golden-crowned kinglet (*Regulus satrapa*), American crow (*Corvus brachyrhynchos*), broadwing hawk (*Buteo platypterus*), sharpshin hawk (*Accipiter striatus*), song sparrow (*Melospiza melodia*), downy woodpecker (*Picoides pubescens*), ring-billed gull (*Larus delawarensis*), and black back gull (*Larus marinus*), and a variety of waterfowl and wading birds.

Although several species of wildlife, particularly those associated with forests and meadows, may reside in or near the project area, the actions evaluated in this EA would be undertaken in previously disturbed areas that are subject to high visitor and vehicular traffic.

Environmental Consequences

Methodology

The NPS Organic Act, which directs parks to conserve wildlife unimpaired for future generations, is interpreted by the agency to mean that native animal life should be protected and perpetuated as part of the park's natural ecosystem. Natural processes are relied on to control populations of native species to the greatest extent possible; otherwise they are protected from harvest, harassment, or harm by human activities. According to *NPS Management Policies 2001*, the restoration of native species is a high priority (sec. 4.1). Management goals for wildlife include maintaining components and processes of naturally evolving park ecosystems, including natural abundance, diversity, and the ecological integrity of plants and animals. Information on Acadia National Park wildlife was taken from park documents and records. Park natural resource management staff, the U.S. Fish and Wildlife Service, and the Maine Department of Inland Fisheries and Wildlife also provided wildlife information.

Negligible: There would be no observable or measurable impacts to native species, their habitats, or the natural processes sustaining them. Impacts would be of short duration and well within natural fluctuations.

Minor: Impacts would be detectable, but they would not be expected to be outside the natural range of variability and would not be expected to have any long-term effects on native

species, their habitats, or the natural processes sustaining them. Mitigation measures, if needed to offset adverse effects, would be simple and successful.

Moderate: Breeding animals of concern are present; animals are present during particularly vulnerable life stages, such as migration or juvenile stages; mortality or interference with activities necessary for survival can be expected on an occasional basis, but is not expected to threaten the continued existence of the species in the park unit. Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they could be outside the natural range of variability for short periods of time. Mitigation measures, if needed to offset adverse effects, would be extensive and likely successful.

Major: Impacts on native species, their habitats, or the natural processes sustaining them would be detectable, and they would be expected to be outside the natural range of variability for long periods of time or be permanent. Key ecosystem processes might be disrupted in the long term or permanently. Loss of habitat might affect the viability of at least some native species. Extensive mitigation measures would be needed to offset any adverse effects and their success would not be guaranteed.

Effects of Alternative A

There would be no change in wildlife habitat, and no actions would be taken that would affect wildlife populations in the vicinity of the Sand Beach visitor facilities.

Cumulative Impacts

Projects throughout the park could cause minor adverse short-term, construction-period disturbance to wildlife because of increases in noise and activity; however, this project would have negligible impacts to wildlife. Therefore, there would be no cumulative impacts to wildlife and wildlife habitat associated with the No Action Alternative.

Effects of Alternative B

Wildlife in the project area would be habituated to high levels of disturbance and human activity and would be affected negligibly, if at all, only during construction activities. New utility lines would be installed underground in areas of lawn. Smaller creatures such as insects and rodents that inhabit the lawn setting would be displaced during construction. The displacement, however, would be temporary and should not affect long-term habitat or reproduction. No existing habitats would be permanently lost or degraded, and removing the north changing room and constructing a smaller lifeguard building in its place would create an additional 500 square feet of lawn habitat. The overall impact to wildlife and wildlife habitat would be negligible, and thus there would be no impairment to these resources.

Cumulative Impacts

Rehabilitation and new construction in the park could have short-term minor adverse impacts on wildlife populations because of increases in noise and activity. This disturbance would last only as long as construction, and there would be no long-term cumulative effects to wildlife from this or other projects.

Effects of Alternative C
A small area of lawn habitat (260 square feet) would be lost by constructing the lifeguard storage building and vault toilet in the existing grass area between the north comfort station and the parking lot. Small, lawn creatures would be displaced in this area, but this would not affect the overall abundance or distribution of local populations. The overall impact to wildlife and wildlife habitat would be negligible, and thus there would be no impairment to these resources.

Cumulative Impacts
The cumulative impacts would be the same as Alternative B.

3.4 Visitor Use and Experience

3.4.1 Affected Environment

The Sand Beach visitor facilities are used year-round by park visitors who come to sunbathe, walk, swim, and enjoy the sandy beach environment. It also provides access to the Great Head trail. Sand Beach is a popular day-use area along the Park Loop Road and is frequently visited by bus tours as a comfortable and scenic spot. The Sand Beach facilities are primarily used by swimmers and picnickers during the summer months (Memorial Day through Labor Day). Ranger-led programs are provided at Sand Beach in July and August, and include a night program called "Stars Over Sand Beach." Sand Beach and its associated facilities are accessed via the Park Loop Road and are served by the Island Explorer shuttle bus system.

Sand Beach is one of only a few places within Acadia National Park where visitors can safely access the ocean. Important parts of this experience include the quality and convenience of the facilities. The changing rooms are currently in poor condition and do not provide adequate privacy to visitors.

Sand Beach is a stop on many bus tours, and restroom facilities enhance its popularity as a stopping point for such groups. The comfort station, seasonal portable toilet, and changing rooms are not accessible to persons with disabilities. The visitor experience is adversely affected when the pump station utility systems fail at peak periods. There is no electric service to the visitor facilities at Sand Beach, making the comfort station difficult and unsafe to use after dark.

3.4.2 Environmental Consequences

Methodology

NPS Management Policies 2001 state that the enjoyment of park resources and values by the people of the United States is part of the fundamental purpose of all parks and that the National Park Service is committed to providing appropriate, high-quality opportunities for visitors to enjoy the parks.

Part of the purpose of Acadia National Park is to offer opportunities for recreation, education, inspiration, and enjoyment. Consequently, one of the park's management goals is to ensure that visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.

Observation of visitation patterns combined with the assessment of what is available to visitors under current management was used to estimate the effects of the actions in the various alternatives in this document. The impact on the ability of the visitor to experience a full range of park resources was analyzed by examining resources and objectives presented in the Acadia National Park significance statement. The potential for change in visitor use and experience proposed by the alternatives was evaluated by identifying projected increases or decreases in the use of the Sand Beach facilities and other visitor uses, and determining whether or how these projected changes would affect the desired visitor experience and to what degree and for how long.

Negligible: Visitors would not be affected or changes in visitor use and /or experience would be below or at the level of detection. Any effects would be short-term. The visitor would not likely be aware of the effects associated with the alternative.

Minor: Changes in visitor use and/or experience would be detectable, although the changes would be slight and likely short-term. The visitor would be aware of the effects associated with the alternative, but the effects would be slight.

Moderate: Changes in visitor use and/or experience would be readily apparent and likely long-term. The visitor would be aware of the effects associated with the alternative and would likely be able to express an opinion about the changes.

Major: Changes in visitor use and/or experience would be readily apparent, severely adverse or exceptionally beneficial, and would have important long-term consequences. The visitor would be aware of the effects associated with the alternative and would likely express a strong opinion about the changes.

Effects of Alternative A (No Action Alternative)

The No Action Alternative would result in the continued deterioration of the Sand Beach changing stations, comfort station facilities, and utilities, with the result that the quality of visitor experiences would continue to slowly decline. Lack of privacy would continue to be a problem at the changing rooms, and the structures could eventually deteriorate to the point where they would be closed. As the comfort station building and winter portable toilet are not universally accessible, the No Action Alternative would have a detrimental long-term impact on the quality of the visitor experience for those in need of easy access. Utilities at the site would continue to be inadequate and fail during the peak season. The No Action Alternative would not result in any immediate construction phase noise or traffic impacts except when emergency repairs were required, which could occur during peak visitation periods and affect access to and use of the visitor facilities. The No Action Alternative would lead to a continued

deteriorating quality of the visitor experience at the site, and offer no long-term benefits. The impact would be adverse, moderate, and long-term.

Cumulative Impacts
Projects throughout the park could cause minor adverse short-term, construction-period disturbance to visitors because of increases in noise and activity; however, they would have an overall beneficial effect on visitor experience. The No Action Alternative would have adverse, moderate, and long-term impacts to visitors. Therefore, the effects would offset, and there would be negligible cumulative impacts.

Effects of Alternative B (Preferred Alternative)

Removing twelve changing rooms would have a negligible impact on visitors because all rooms are currently not used, even in the summer season. The upgraded pump station would meet current and projected demands and be more reliable, reducing service disruption during peak periods. Providing electric and telephone service to the visitor facilities would allow visitors a more comfortable visit to the comfort station on darker days or in the evening. Improved utilities at the site, particularly telephone service, would also benefit lifeguards in emergencies. Locating utilities underground would improve the appearance of the site.

Construction would be scheduled to minimize adverse impacts on visitor use of the facilities. Temporary restroom facilities would be provided during the construction period. The access road could be closed during installation of the utility lines beneath it, but this impact would be short-term and steps would be taken to minimize impacts to visitors to the site. There could be short-term minor adverse impacts to visitors; however, the overall effect of Alternative B would be moderate, long-term, and beneficial.

Cumulative Impacts
Other recent, planned, or ongoing projects within Acadia could also have minor short-term construction phase adverse impacts on the quality of visitor experience at the park, but would lead to improvements that would enhance visitor enjoyment of the park moderately over the long-term. This project, considered together with the other programmed improvements at Acadia including rehabilitating Seawall and Blackwoods Campgrounds and Echo Lake Beach facilities, would result in cumulatively long-term moderate beneficial impacts to visitor experience.

Effects of Alternative C

The impacts of Alternative C on the visitor experience would be the same as those in Alternative B. Alternative C would enhance the visitor experience by providing accessible restroom facilities throughout the year, and by providing updated, improved, and private changing rooms for all beach users. Upgraded pump stations would meet demands and be more reliable, reducing service disruption during peak periods. Construction would be scheduled so there would be minimal adverse impacts on visitors using the facilities, and temporary restroom facilities would be provided during the construction period.

Alternative C could have short-term minor adverse impacts to visitors; however, the overall effect of Alternative C on visitor experience would be moderate, long-term, and beneficial.

Cumulative Impacts
This project, considered together with the other improvements at Acadia including rehabilitating Seawall and Blackwoods Campgrounds and Echo Lake Beach facilities, would result in short-term minor adverse cumulative effects, but long-term moderate beneficial effects to visitor experience.

3.5 Park Infrastructure and Operations

3.5.1 Affected Environment

The water supply for the Sand Beach facilities comes overland from a connection at Blackwoods Campground. A high-density polyethylene (HDPE) and galvanized steel line connects from an aboveground water storage tank at Blackwoods Campground to the Sand Beach comfort station. The water pipes surface approximately 60 feet behind the comfort station and travel on the surface to Blackwoods Campground, a distance of about 1.8 miles. The system requires frequent repair due to the age and deteriorated condition of some of the pipes and joints.

The sewer system is comprised of a buried holding tank, duplex submersible pump station, and a buried motor actuated valve box. The existing, belowground sewer pumps are corroded and prone to failure. The small, underground chambers are confined spaces that are very difficult to work in when repairs or maintenance are required. A 4-inch pipe runs from the pump station to the comfort station and is old and corroded.

There is no electric service to the visitor facilities at Sand Beach. Overhead electric lines run along the Park Loop Road, and an underground line feeds the pump station. There is a pay phone located in the parking lot, adjacent to the Park Loop Road, but there is no telephone service to the visitor facilities. Park operational efficiency, particularly in emergencies, is hindered by not having access to phone service.

Pavement surrounding the comfort station and changing stations is cracked, making the area difficult for visitors with disabilities to access. Water puddles along the back of the comfort station and contributes to the structure's deterioration.

3.5.2 Environmental Consequences

Methodology

Park operations, for the purpose of this analysis, refers to the quality and effectiveness of the infrastructure, and the ability to maintain the infrastructure, used in the operation of the park in order to adequately protect and preserve vital resources and provide for an effective visitor experience. This includes an analysis of the condition and usefulness of the facilities and developed features used to support the operations of the park.

Park staff knowledgeable of these issues were members of the planning team that evaluated the impacts of each alternative. Impact analysis is based on the current description of park operations presented in the Affected Environment section of this document.

Negligible: Park operations would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on park operations.

Minor: The effect would be detectable and likely short-term, but would be of a magnitude that would not have an appreciable effect on park operations. If mitigation was needed to offset adverse effects, it would be simple and likely successful.

Moderate: The effects would be readily apparent, likely long-term, and would result in a substantial change in park operations in a manner noticeable to staff and to public. Mitigation measures would be necessary to offset adverse effects and would likely be successful.

Major: The effects would be readily apparent, long-term, would result in a substantial change in park operation in a manner noticeable to staff and the public and be markedly different from existing operations. Mitigation measures to offset adverse effects would be needed, would be extensive, and their success could not be guaranteed.

Effects of Alternative A (No Action Alternative)

No changes would be made to the existing utility systems, which are prone to failure during the peak season. These systems would continue to deteriorate and could fail more often. Repairing utilities servicing the site would continue to require substantial maintenance efforts. The risks associated with repairing the underground pump station would continue.

Cumulative Impacts
Utility and structural upgrades at a number of locations within the park, including campgrounds and other visitor facilities, would have a moderate beneficial effect on the efficiency of park operations. This alternative would not contribute to the cumulative benefit of these other actions.

Effects of Alternative B (Preferred Alternative)

Sliplining existing wastewater pipes and replacing the underground pump station with an aboveground pump station would decrease maintenance requirements and increase the reliability of consistent service at the visitor facilities. Replacing metal sections of water pipes with HDPE piping and repairing other deteriorated sections of HDPE piping would provide a more resistant pipe aboveground from Blackwoods Campground to the Sand Beach facilities. These improvements would have a moderate beneficial effect.

Adding underground electrical and telephone cable would provide new services to the site, both for visitor and lifeguard use. Energy-efficient lighting systems, code-compliant receptacles, and new electric in the lifeguard building and comfort station would add to a more overall efficient utility system. These services would have a moderate beneficial effect.

Minor grading modifications and corrugated metal piping with small drop inlets would correct drainage problems behind the comfort station, a minor beneficial effect.

The overall impacts of Alternative B would be moderate, long-term, and beneficial.

Cumulative Impacts
Plans to upgrade utilities and park facilities at several locations throughout the park would have a moderate beneficial effect on park operations and infrastructure. The cumulative effect of this alternative would be moderately beneficial and long-term, enhancing park operations and efficiency.

Effects of Alternative C

The impacts to infrastructure would be the same as in Alternative B.

Cumulative Impacts
The cumulative impacts would be the same as Alternative B.

4 Consultation & Coordination

4.1 Introduction

The National Environmental Policy Act requires federal agencies preparing environmental assessments to consult with stakeholders, including the general public and regulatory agencies, early in the planning process to identify issues and concerns. This chapter documents the consultation to date for rehabilitating the visitor facilities at Sand Beach. A list of potentially necessary permits is included in this section, as well.

4.2 Brief History of Planning and Public Involvement

A Design Analysis Report was prepared for this project by the NPS Denver Service Center in July 2001. Subsequently, a planning workshop was conducted at Acadia National Park headquarters in October 2001, and a 50 percent design review was held at the park in February 2002. As the design process moves forward, public involvement will be sought during the 30-day public review period, in which written comments will be solicited. The agencies listed below have been contacted to engage their involvement in the planning process.

4.3 Interagency Coordination

In completing this EA, the National Park Service has solicited comments from federal, state, and local agencies with interests in the project area, including:

- Coastal Program, Maine State Planning Office
- Maine Department of Environmental Protection
- Maine Department of Inland Fisheries and Wildlife
- Town of Bar Harbor
- U.S. Army Corps of Engineers
- U.S. Fish & Wildlife Service

Please see Appendix A for copies of written correspondence with agencies.

4.4 Compliance

Clean Water Act of 1972

The purposes of the Clean Water Act (CWA) are to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." To achieve this goal, the U.S. Army Corps of Engineers (COE) has been charged with evaluating federal actions that result in potential degradation of waters of the U.S. and issuing permits for actions consistent with the CWA. A description of the COE's CWA program is contained in 33 CFR 320-330.

The proposed project would not alter or fill wetlands, and therefore would be in compliance with the Clean Water Act. No permit under Section 404 would be required (COE, S. Mahaney, pers comm., April 18, 2002).

Coastal Zone Management Act of 1972 (CZMA)

Under CZMA section 307(c) and 15 CFR Part 930, sup-part C, federal government actions within the coastal zone must be consistent with state and local regulations. A consistency determination will be made by the Maine Coastal Program based upon information, data, and analysis given in this report and additional information to be submitted subsequently in support of permit applications (MCP, T. Burrowes, pers comm. July 8, 2002). The NPS believes that the Sand Beach Visitor Facilities Rehabilitation project will be consistent to the maximum extent practicable with the enforceable policies of the Maine Coastal Program. The NPS will acquire all necessary permits to conduct work within the coastal zone. CZMA concurrence would not be effective and no work would begin until all such approvals are obtained.

Endangered Species Act of 1973, as amended (16 USC 1531 et seq.)

Section 7 of the Endangered Species Act (ESA) requires that a federal agency consult with the U.S. Fish & Wildlife Service (USFWS) or the National Marine Fisheries Service on any action that may affect endangered or threatened species or candidate species, or that may result in adverse critical habitat modifications. Consultation with USFWS (USFWS, R. Joseph, Maine Field Office, letter, July 10, 2002) has indicated that the proposed project would not have an adverse effect on federally listed threatened species or species of special concern because there are no known federally listed species in the vicinity of the project location.

National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.)

Compliance requirements for the treatment of cultural resources as outlined in Sections 110 and 106 of the National Historic Preservation Act (NHPA), and the NPS Programmatic Agreement, have been initiated concurrently and independently of this EA. The project is currently under review by the park's cultural resources program manager and the NPS cultural resource regional advisory team. As outlined in Section 110, the Sand Beach facilities are being evaluated for eligibility to the National Register of Historic Places. Preliminary research indicates that they are not historically or architecturally significant enough to warrant inclusion; however, a formal determination will be made in consultation with the SHPO. In addition, the NPS engaged a state-certified archeologist to conduct an archeological survey. No archeological resources were discovered, and a report will be sent to the SHPO seeking concurrence. No construction or ground disturbing activities will take place until consultation with the SHPO has concluded, as required by Section 106.

Maine Natural Resources Protection Act (38 M.R.S.A. Section 480)

Rehabilitating the Sand Beach visitor facilities would not require authorization under the Maine Natural Resources Protection Act [NRPA (38 M.R.S.A. § 480)], under authority of the Maine Department of Environmental Protection (MDEP) (MDEP, J. Beyer, pers comm., November 7, 2002).

Initial consultation with the MDIFW through their website http://www.state.me.us/ifw/wildlife/endangered/SFList.htm revealed no state listed threatened or endangered species within the boundaries of the site. A search of the MDIFW website (http://www.state.me.us/ifw/wildlife/endangered/SFList.htm) and additional consultation (MDIFW, T. Schaeffer, pers comm., April 26, 2002) confirmed that no state listed threatened or endangered species exist within the boundaries of the site.

Mandatory Shoreline Zoning Act

The Mandatory Shoreline Zoning Act, which is administered at the local level, was enacted in the early 1970s in order to prevent water pollution and damage to shorelines and riparian habitat. The ordinance applies to all areas within 250 feet of lakes, ponds, rivers, tidal areas (coastal wetlands) and freshwater wetlands, and at least 75 feet from certain streams (Town of Bar Harbor, K. Keene, Code Compliance Officer, pers comm., 2002). Reconstructing and replacing existing buildings and structures within the shoreline zone would not require the issuance of a permit; however, constructing a new building, as in Alternative C, would likely require review under the town's Shoreline Zoning ordinance. This project will comply with the Mandatory Shoreline Zoning Act.

4.5 List of Recipients

This environmental assessment will be on formal public review for 30 days and has been distributed to a variety of interested individuals, agencies, and organizations, including those listed under "Consultation & Coordination." This EA is available on the Internet at http://www.nps.gov/acad/management.htm and is available at local libraries during the review and comment period.

Elected Officials
Susan B. Collins, U.S. Senate
Ted Koffman, Maine House of Representatives
Olympia Snowe, U.S. Senate

Federal Agencies
Jay Clement, U.S. Army Corps of Engineers
Gordon Russell, U.S. Fish & Wildlife Service

State and Local Agencies
James Beyer, Maine Department of Environmental Protection
Todd Burrowes, Maine Coastal Program
Michael MacDonald, Town of Mt. Desert
Maine State Historic Preservation Office
Louis Sidell, Maine Floodplain Management Program
Tom Schaeffer, Maine Department of Inland Fish and Wildlife
Dana Reed, Town of Bar Harbor

Community Organizations and Consulting Partners
Acadia Corporation
Carriages in the Park
Friends of Acadia
National Park Bus Tour
Ollie's Trolley

Libraries
Bangor City Library
Bass Harbor Memorial Library
Ellsworth Public Library
Jesup Memorial Library (Bar Harbor)
Northeast Harbor Library
Seal Harbor Library
Somesville Public Library
Southwest Harbor Public Library
Thorndike Library (College of the Atlantic)

The following were sent a press release announcing the availability of the EA:

Bangor Daily News
Bar Harbor Times
Mount Desert Islander

References

Acronyms

ADA – Americans with Disabilities Act
CEQ – Council on Environmental Quality
CFR – Code of Federal Regulations
COE – Corps of Engineers
CWA – Clean Water Act
CZMA – Coastal Zone Management Act
EA – Environmental Assessment
EPA – Environmental Protection Agency
ESA – Endangered Species Act
FEMA – Federal Emergency Management Act
HDPE – High Density Polyethylene
MCP – Maine Coastal Program
MDEP – Maine Department of Environmental Protection
MDIFW – Maine Department of Inland Fisheries and Wildlife
NEPA – National Environmental Policy Act
NHPA – National Historic Preservation Act
NPS – National Park Service
NRPA – Natural Resources Protection Act
PVC – Polyvinyl Chloride
SHPO – State Historic Preservation Office
USFWS – U.S. Fish and Wildlife Service

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List of Preparers

This document was prepared by Vanasse Hangen Brustlin, Inc. and Acadia National Park with design and technical assistance from Goody Clancy and Associates, Inc.

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Lisa Standley, Ph.D.	Chief Environmental Scientist	25 years experience	Project management and document preparation.
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Appendix A

Correspondence

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Field Office
1033 South Main Street
Old Town, ME 04468-2023
(207) 827-5938

To: Jill Cohen
Vanasse Hangen Brustlin, Inc.
PO Box 9151
Watertown, MA 02471-9151

July 1, 2002

Thank you for your letter requesting information or recommendations from the U.S. Fish and Wildlife Service. This form provides the Service's response pursuant to Section 7 of the Endangered Species Act (ESA), as amended (16 U.S.C. 1531-1543), and the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667d).

Project Name/Location/County: Sand Beach Visitor Facilities / Acadia National Park / Hancock

Date of Receipt of Incoming Letter: May 6, 2002 **Log Number**: 02-220B

Based on the information currently available to us, no federally-listed species under the jurisdiction of the Service are known to occur in the project area, with the exception of occasional, transient bald eagles (*Haliaeetus leucocephalus*). Accordingly, no further action is required under Section 7 of the ESA, unless: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by the identified action.

A list of Federally-listed species in Maine is enclosed for your information. Please contact the Maine Department of Inland Fisheries and Wildlife and Maine Natural Areas Program for an up to date account of state-listed species in the project area.

If you have any questions, please call Ron Joseph at (207) 827-5938, Ext. 15.

Ron Joseph 7/01/02

Biologist Date

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of of land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all out people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

December 2002

United States Department of the Interior-National Park Service